

JPRS 77205

19 January 1981

Worldwide Report

TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT

No. 146



FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Old Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

19 January 1981

WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 146

CONTENTS

WORLDWIDE AFFAIRS

Briefs		
	Japan, Greece Agreement	1

ASIA

INTER-ASIAN AFFAIRS

Briefs		
	PRC, DPRK Radio-TV Agreement	2

INDONESIA

Briefs		
	Sumatra Earth Satellite Stations	3

JAPAN

	Okinawan Paper on Jamming Wave Detecting Station (RYUKYU SHIMPO, 28 Dec 80)	4
--	--	---

LAOS

	Progress on Vientiane Radio Station, Degree of Autonomy, Assistance Noted (VIENTIANE MAI, 29 Oct 80)	6
--	--	---

Briefs		
	Savannakhet Wired Radio Networks	7

REPUBLIC OF KOREA

Briefs		
	'YONHAP' News Agency Formed	8

VIETNAM

Briefs

Phu Khanh Radio Network

9

LATIN AMERICA

ARGENTINA

Communications Secretary Discusses Future Plans

(LA PRENSA, 21 Nov 80) 10

Rocket Launching Platform Tested in Marambio Base

(LA PRENSA, 28 Nov 80) 12

BRAZIL

Figueiredo To Receive Satellite Plans for Approval

(O ESTADO DE SAO PAULO, 9 Dec 80, JORNAL DO BRASIL,
9 Dec 80) 16

President To Decide

Communications Minister Speaks

Digital Communications Systems Successfully Tested

(Maria Cristina Frias; FOLHA DE SAO PAULO, 6 Dec 80) 19

Briefs

Telecommunications Funding Assured 22

NORTH EAST AND NORTH AFRICA

NORTH AFRICAN AFFAIRS

Briefs

Morocco, Iraq Direct Telegraph Line 23

TUNISIA

Briefs

Agreement for 60,000 Lines 24

SUB-SAHARAN AFRICA

SENEGAL

ORTS Setting Up Emergency Plan To Overcome Problems

(Abdallah Faye; LE SOLEIL, 20 Nov 80) 25

TANZANIA

Briefs

Telecommunications Improvements 27

USSR

Briefs

TV Station Commissioned	28
Radio Transmitter in Altayskiy Kray	28
'Orbita' Station Commissioned	28

WEST EUROPE

INTERNATIONAL AFFAIRS

Briefs

New EEC Data Bank	29
-------------------	----

FRANCE

Experimental Use of Telematics for Daily Press (AFP SCIENCES, 30 Oct 80)	30
---	----

ITALY

Uncertain Future for Nation's Telecommunications Industry (Marilisa Verti; ELECTRONIQUE ACTUALITES, 21 Nov 80)	31
--	----

NORWAY

New Optical Fiber Cable (NORGES HANDELS OG SJOFARTSIDENDE, 12 Oct 80)	34
--	----

Briefs

Telephone Net To Expand	35
-------------------------	----

WORLDWIDE AFFAIRS

BRIEFS

JAPAN, GREECE AGREEMENT--Today an agreement was signed between the Greek Telecommunications Organization and Japanese technical firms for installation of a third ground satellite station in Thermopilai which will cost 200 million drachmas and will start operating in February 1982. The new satellite station, which will be linked with the fifth satellite of the intersat system which is permanently stationed over the Atlantic Ocean, will significantly improve Greece's telecommunications with the countries of North and South America. [Text] [AT292045 Athens Domestic Service in Greek 1930 GMT 29 Dec 80]

CSO: 5500

BRIEFS

PRC, DPRK RADIO-TV AGREEMENT--Pyongyang, Dec 30 (XINHUA)--An agreement and related appendixes on the use of frequencies for television and frequency-modulated broadcasting in the border areas were initiated here yesterday between China and Korea. A protocol to this effect was signed. These documents were initiated or signed by Lu Keqin, leader of the Chinese Broadcasting Technique delegation and vice-director-general of the Chinese Broadcasting Administrative Bureau, and Chon Tok-Chil, vice-minister of communications and leader of the Korean Broadcasting Technique delegation. The Chinese guests arrived here on December 9. During their stay here, they had friendly talks with their Korean counterparts. The two sides acknowledged each other's long-term development programme and coordinated the use of frequencies of medium wave television and frequency-modulated broadcasting in the border areas between the two countries. Vice-premier of the Administration Council of Korea Kye Ung-Tae received and had a friendly talk with the delegation this afternoon. [Text] [OW301554 Beijing XINHUA in English 1516 GMT 30 Dec 80]

CSO: 5500

INDONESIA

BRIEFS

SUMATRA EARTH SATELLITE STATIONS--The government has entrusted the Indonesian Telecommunications Industry Company in Bandung with the construction of 20 small earth satellite stations in Sumatra for completion in 1981. Almost all the equipment to be installed at the stations will be produced locally, the company director has said. The company has built similar projects in several Indonesian provinces with good result. [BK051147 Jakarta Domestic Service in Indonesian 1200 GMT 1 Jan 81]

CSO: 5500

OKINAWAN PAPER ON JAMMING WAVE DETECTING STATION

OW280945 Naha RYUKYU SHIMPO in Japanese 28 Dec 80 morning edition p 13

[Text] It was 2 years ago that a doppler-formula radio wave bearing measurement facility, developed by Japan and the world's first, was set up on Ishigaki Island. Since then, the facility has displayed its merits and made great achievements in catching and measuring the bearings of interfering (jamming) radio waves emitted from foreign countries. According to a tabulation by the Okinawa Posts and Telecommunications Management Office, a total of 918 radio waves had their bearings measured by the facility between April and 24 December 1980, and 11 waves were found to be interfering with those emanating from Japan. In each case, action was taken to request the country concerned to remove the interfering waves. Okinawa has a radio station for ionospheric observation which belongs to the Okinawa Radio Wave Observatory under the Posts and Telecommunications Ministry. It also has a manmade satellite tracking radio station under the control of the National Space Development Agency's Okinawa Tracking Control Office. Thus, Okinawa occupies an important position in Japan's radio wave administration.

Before the installation of the Ishigaki station, Japan had four radio wave bearing measurement stations located in Hokkaido, Kanto, Kinki, and Kumamoto. They measured bearings of the radio waves emanating from China, Korea, the Soviet Union and various other countries. When interfering waves were detected, the stations asked the countries concerned to halt transmission of the waves, thereby protecting Japan's radio communications from disturbances by foreign radio waves.

However, because the stations were still insufficient for measurement operations and because accuracy needed to be improved, a doppler-formula facility was set up in November 1978 on Ishigaki Island, which is the nearest to mainland China. With the establishment of this station, which represents Japan's highest technology, the range of the measurement area has substantially widened and the accuracy of the measurement has been conspicuously improved.

The Ishigaki station is located at Shiraho Yonabaru in Ishigaki City. It is an unmanned station and is operated by remote control from the Okinawa Posts and Telecommunications Management Office in Naha.

The following figures show numbers of foreign radio waves measured by the station in pertinent months in 1980: 241 waves in April; 2 waves in May; 44 waves in June; 128 waves in July; 80 waves in August; 76 waves in September; 121 waves in October; 101 waves in November; 125 waves in December. Of a total of 918 waves measured,

11 were found to be interfering with and disturbing radio waves emanating from Japan. Requests were made to the authorities concerned in the pertinent countries for action to remove interfering waves.

At present, the station reportedly is not engaged in measuring the bearings of jamming waves transmitted for political and military purposes. It is said that the station often finds interfering waves from countries which do not participate in an international treaty that allots radio waves to its signatories. Those waves are said to be mostly from China (including Taiwan), Korea and the Soviet Union.

CSO: 5500

PROGRESS ON VIENTIANE RADIO STATION, DEGREE OF AUTONOMY, ASSISTANCE NOTED

Vientiane VIENTIANE MAI in Lao 29 Oct 80 p 3

['Conversations With the Editor' Column]

[Text] Dear editor of VIENTIANE MAI,

We would like to ask about Radio Vientiane because we read earlier in VIENTIANE MAI that there were problems with this station. The problems we would like to ask about are:

1. When will the radio station of the City and Province of Vientiane start up and what has been done on it?
2. What is the significance of this station? Is it independent of central control or does it belong to the City of Vientiane?
3. Is there any other country helping in this?

[signed] Bounsong 22/10/80

[Answer] Comrade Bounsong, actually VIENTIANE MAI has already answered questions on the problems of Radio Vientiane, but these were only news reports. Now we would like to make some observations on the developments in question:

1. We cannot give you a definite date but would like to say that it will be before the fifth [National Day] anniversary on 2 December. Right now we have set up almost everything, that is the planning, the organization, and the assembling (the station). Now I believe we are 90 percent complete, and we have broadcast many times in testing with adequate results. The comrade can hear us by turning his dial to 1200. I cannot say what [the broadcast] times are because it is just for adjusting the broadcasting equipment; they do not broadcast every day. Usually they start in the morning and the evening: at 0500 hours and 1900 hours. [The hours] will be announced when the basic tests are completed.
2. It belongs to the City and Province of Vientiane and is the mouthpiece of the Provincial Party Committee. This means that its management is affiliated with the Province of Vientiane but special direction can also come from the central authorities as well.
3. At this initial stage no assistance has been received from the group of friendly nations. Some assistance programs are planned but these are for the future. In any case neighboring experts have supervised and helped us.

8149

CSO: 5500

BRIEFS

SAVANNAKHET WIRED RADIO NETWORKS--At the end of September the Department of Propaganda of Savannakhet Province sent a number of cadre technicians to set up wired radio networks for the administration of Outhoumphon District and Atsaphangthong District in order to expand the mass communications network in their province. These will be used to disseminate the policies and resolutions of party and state as well as provincial authorities quickly and widely. Each system consists of a 250 watt transmitter and 10 speakers which are now being used for mass communications. [Text] [Vientiane KHAOSAN PATHET LAO in Lao 21 Oct 80 pA3] 8149

CSO: 5500

REPUBLIC OF KOREA

BRIEFS

'YONHAP' NEWS AGENCY FORMED--Seoul Jan 5 (YONHAP)--The YONHAP News Agency, now Korea's only news service agency, went into operation Jan 1, pledging to do its best to fulfill its "profound journalistic mission," and promising "accurate news reporting and fair commentary." In an inaugural message, YONHAP President Kim Song-Chin and the news agency's senior staff members said YONHAP will step up press activity, promoting "vigorous international news exchanges and mutual understanding." Kim's message said YONHAP will live up to its motto calling for contributing to national development and the promotion of culture by displaying creativity befitting a news service agency. YONHAP's birth, in a merger of Orient Press and Haptong News Agency, follows last November's adoption of resolution by the Korean Newspaper Association pledging to reshape the country's journalistic organizations to comply with "the demands of the time." [Text] [SK050124 Seoul YONHAP in English 0106 GMT 5 Jan 81]

CSO: 5500

VIETNAM

BRIEFS

PHU KHANH RADIO NETWORK--Phu Khanh Province now has more than 70 wired radio stations, including 52 in the delta and mountainous regions and on offshore islands, with nearly 2,000 loudspeakers to serve the people at various public places and in residential areas. Thanks to the expansion of the wired radio network, the people in all localities in the province have promptly been informed of the policies adopted by the party and the state. [Hanoi Domestic Service in Vietnamese 2300 GMT 1 Jan 81]

CSO: 5500

ARGENTINA

COMMUNICATIONS SECRETARY DISCUSSES FUTURE PLANS

Buenos Aires LA PRENSA in Spanish 21 Nov 80 p 7

[Text] The communications secretary, Gen Eduardo Corrado, has discussed some future telecommunications projects for Argentina.

He said that at the end of 1982 the National System of Satellite Communications will begin to operate; this will be combined with the national telecommunications network to bring communications to areas that are very hard to reach by any other type of system. It will also bring television or radio signals to border areas that are now not part of the National Radio and Television Broadcasting Network.

This system, he pointed out, will consist of a main station located in Balcarce; two stations located in Catamarca and Comodoro Rivadavia, which will be connected with the national long distance telephone system; six alternative ground stations for emergency use; and 24 remote stations, three of which will be located in Argentina Antarctica.

This project, he added, will form a communications system that will enable all the ground stations to be interconnected and to be connected with the general telecommunications network. The system will operate with a transponder and half of an Intelsat satellite.

Rural Telephone System

Later he explained some details of the rural telephone system. This system uses a wireless telephone (radio connection) to contact subscribers who are located up to a maximum distance of approximately 50 kilometers from the base radio station; they are then connected with a telephone exchange, which can provide all the facilities of the national telecommunications system, including national long distance dialing and international service.

Electronics Industry

In speaking of the electronics industry, he said that "an awareness of the vast snowballing effect of electronics development has led nations to promote the use and development of their electronics industries by stimulating and promoting the use of electronics, by investments in research, and by the establishment of purchasing policies.

"For that reason, and also considering the large purchasing power of the communications sector, it will be necessary for us to set clear and precise goals promoting the development of the communications industry in Argentina.

"It is the intention of the department of communications to take part in this modern world and by means of electronics and communications, to help to improve the productive structure of the nation in order to achieve our regional and national goals.

"We are fully aware that the growth of communications will stimulate national development, and without communications, this development will not be possible. That is why the department of communications, in conjunction with the ENTEL [National Telecommunications Company] and the ENCOTEL [National Mail and Telegraph Enterprise] has conducted and is continuing to conduct this vast program, so that in the decade of the 1980's, the nation may be among the most developed in this field."

7679

CSO: 5500

ARGENTINA

ROCKET LAUNCHING PLATFORM TESTED IN MARAMBIO BASE

Buenos Aires LA PRENSA in Spanish 28 Nov 80 p 16

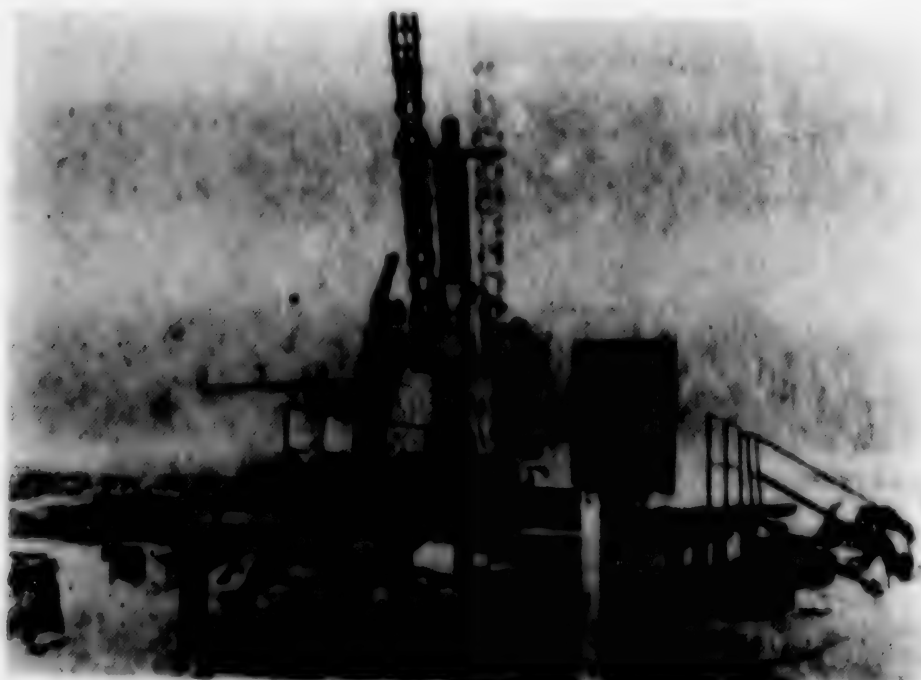
[Text] A new rocket launching platform was inaugurated yesterday at the Commodore Marambio base with the launch of a sounding rocket. This facility belongs to the CNIE [National Commission for Space Research] and is operated under the Argentine Air Force. This facility will be used to take part in international programs for meteorological research in the upper and middle atmosphere.

The inaugural ceremony of the Marambio base was presided by the commander of air operations, Maj Gen Jesus Orlando Capellini, who was accompanied at the ceremony by, among others, the head of the CNIE, Brig Gen Miguel Sanchez Pena; the former air force commanders, Brig Gens Heriberto Ahrens, Angel Jorge Peluffo, Carlos Alberto Rey, Orlando Ramon Agosti, Cayo Antonio Alsina, Juan Francisco Fabri, and Alfredo Juan Vedoya; by top officials of the CNIE, civil servants from organizations involved with aerospace activity, delegations from other armed forces, and a group of reporters from the capital and the interior of the nation.

The Launch Base

The CNIE, as part of a program of international cooperation for the study of the atmosphere, has established this sounding rocket launch facility, which will form part of the CELPA [Rocket Testing and Launching Centers] located at Chamical in La Rioja province and at Mar Chiquita, in Buenos Aires province. This will provide a system suitable for scientific research in the middle and upper atmosphere. The Marambio launch base in the Antarctic will be used to launch rockets with a variety of characteristics: one and two stage rockets with ranges between 65 and 500 km in altitude, with payloads of up to 75 kg. Suitable facilities have been built for these missions: a platform with its launcher, a hangar for assembling the rocket, which will have adequate protection from the harsh Antarctic climate. The launcher is mounted on rails, and once the

rocket is installed in the launching device, it is moved outside where its inclination and direction are adjusted, depending on the atmospheric conditions and the technical requirements of the experiment.



Two technicians determine the launch position of a rocket at the CNIE's Marambio Base.

First Launches

The first launches from the new base will use two types of rockets: the smaller has a range of 65 km and the larger has a 75-km range. These rockets carry a payload that is released from the nosecone when it reaches the correct altitude; the payload is then supported by parachutes. It immediately begins to transmit atmospheric parameters: pressure, temperature, wind intensity and direction. These parameters give precise atmospheric data and complement the data obtained from meteorological satellites. In a few months instruments capable of determining ozone levels at different altitudes of the atmosphere will be added. The tracking of the device is done first by using an optical finder and then by a radar antenna with an automatic lock-on device. This receives the coded data which is then processed in the computer center at the base.

The CNIE's Marambio base is now commanded by vice commodore Luis Martinez, the head of the Mar Chiquita base. It has facilities for regulation, a telemetry antenna, and a power generator. The radar, the computer, and telemetry reception systems are located in three buildings.

Scientific Exchange

The program set for the operation of the new launch base, which forms part of the inter-American "Exametnet" system for scientific exchange of meteorological studies, includes, in the first phase, launches twice a month and in the near future, weekly launches, like the ones conducted at Mar Chiquita, with similar objectives. The new CNIE base, located in Argentine Antarctica, has been established to meet a very important need for meteorological data; this is required of the countries participating in this international program.



An operator monitors the launch of a rocket, about to be activated, from a console.

The weather conditions at the Marambio base and the harshness of the environment make the CNIE's new facility a unique achievement; for that reason its scientific contribution will be of special importance for meteorological studies in those latitudes where

factors which determine the climatic conditions in vast sectors of the continent are generated. These highly precise data will provide better security for air and maritime navigation and will improve weather forecasting.

7679

CSO: 5500

FIGUEIREDO TO RECEIVE SATELLITE PLANS FOR APPROVAL

President to Decide

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 9 Dec 80 p 18

[Text] On Monday President Joao Figueiredo will begin to decide the future of the national communications satellite. He is going to receive the studies on the launching of the satellite for final consideration, it was reported yesterday in Sao Paulo by Minister of Communications Haroldo Correia de Mattos. The minister will provide Figueiredo with a summarized version of the plan and he already expresses confidence that work on the satellite will begin next year.

The minister was in Sao Paulo at the invitation of TELESP [Sao Paulo Telecommunications] for a fellowship luncheon. He talked at length with newsmen but did not wish to make any comment on the concession of television channels, which should be announced in coming days. Haroldo de Mattos asserted that he did not recommend any of the companies interested in the concession, believing it to be unethical to utter an opinion. "The position of the Ministry of Communications is the same as that of the Presidency of the Republic," he concluded.

After returning to Brasilia, he will seek information on the charges published by ESTADO last week with respect to the concession of an FM channel to a radio-telephone company which is in debt to INAMPS [National Institute for Social Security Medical Assistance]: Radio Metropolitana Paulista of Mogi das Cruzes owes nearly five million cruzeiros to INAMPS and has already pledged its only transmitter and two telephone instruments as collateral. Regardless, it was the winner at a recent drawing held by the Ministry of Communications. The minister declared that he was unaware of the charges.

The installation of the national communications satellite will take nearly 5 years--the space part--and the minister said he was optimistic about its approval by the president of the republic "who has already shown some receptivity on the subject." That phase should cost between \$80 and \$85 million, according to estimates by the minister.

Haroldo Correia de Mattos referred to the lack of money several times, but also complained about the delay in the execution of certain projects which have been hampered by the bureaucracy--when more than one agency is involved--and also the loss of time on the consideration of irrelevant subjects. The minister cited rural telephone systems as an example. Part of their planning has been completed

but up to now the first 2,000 service installations have not been made. There is a lack of money--in 1979 the cost was 800 million cruzeiros--and of joint efforts in the execution of the installations.

"A more tenacious handling" of the problem is being sought at this time, according to Haroldo de Mattos, who has already had a meeting with his colleague, Amaury Stabile, the state secretary of agriculture, to speed up the rural telephone system. In view of the lack of money, he advocates the "need to engage in 'mutirao' [an action similar to a barn-raising in which the work is done gratuitously] among the affected entities, ranging from the cooperatives to the companies of the two ministries involved, in short, among all those affected." The minister said: "At a time when the government has decided to give agriculture a high degree of priority, we have to make the best of our efforts toward providing the farmers with that facility. We need to find a way to at least initiate a solution to a problem which afflicts everyone."

In his talk with the newsmen, Haroldo de Mattos also spoke of another project in his ministry, that of mobile telephones to be installed in passenger cars:

"That is an inexplicable problem. We have been talking about it for more than a year. We want to put it into practice. There are customers and the Ministry has already issued the rules for regulating the service, but I do not know, the affair arrived at TELEBRAS [Brazilian Telecommunications, Inc] and it becomes a matter of arguing about the sex of angels, what the best system is, which is the most advanced technology. The thing remains in a detestable period of marking time."

The minister of communications also reported that a committee is studying the best way to overcome the problem with the CPA's--Stored Program Centers--so that no manufacturer involved will be harmed because the Ministry of Communications cancelled the orders from three accredited manufacturers. Referring to party lines (use of a telephone line by two users), Mattos said he did not know when the system will be installed in Sao Paulo, adding: "That is a TELES P problem not of the ministry."

Haroldo de Mattos also spoke on the needs for telephones in Brazil: "To balance supply with demand [presumably a line dropped at this point] is much smaller than the first, we would have to contract nearly 600,000 new terminals per year every year for the next 10 years. That would be the number needed for effecting a balance." But there are problems and the business sector itself keenly feels that, according to Correia. "The factories are ready for orders much larger than we are in a condition to make and the solution to the problem is beyond the means of the Ministry of Communications since it depends on a government policy," he concluded.

Communications Minister Speaks

Rio de Janeiro JORNAL DO BRASIL in Portuguese 9 Dec p 17

[Text] Sao Paulo--Minister of Communications Haroldo de Mattos said yesterday that the president of the republic and the Space Activities Committee will receive the studies on the domestic satellite on Monday. "If approved, work could begin in 1981 and the satellite goes into orbit in 1985."

He expects 80 percent of the National Telecommunications Fund will be used in 1981 for investments in the sector and if collections exceed those forecast, the ministry will ask for more, which could then guarantee more than 20 billion cruzeiros, according to projections. Last year, of the 26 billion cruzeiros of the fund, nearly 13 billion cruzeiros went to the sector.

Satellite

The domestic satellite, rural telephone system and mobile telephones, in addition to a decision in the area of the CPA's "which would contain" all of them,—even those which had to do with space—are within the priorities of the government for 1981. Haroldo de Mattos, however, does not like to speak about priorities "because the system needs to grow harmoniously and homogeneously."

Eleven earth stations will be installed on a priority basis in the Amazon Region, Fernando de Noronha and upland virgin forests. He regretted that Argentina "because of political problems in the telecommunications area," cannot participate in the satellite project, "which would reduce costs by at least half by means of joint commercialization."

He also regretted, not the absence of money "but rather because the lack of greater cooperation in various areas," made it impossible to advance more in the rural telephone system in 1980. With respect to mobile telephones, the minister said that it has already been decided that TELEBRAS will not participate with its own money. The company entering the winning bid—the auction will be held soon—will be the one which will be responsible for the installation of the system with the participation of the users.

The minister is not concerned about the financial position of the state companies of the sector—the TELEBRAS System—and said that generally all will end up well. He explained, however, that the companies located in the more needy regions may wind up with some losses and that others in the more prosperous regions should obtain an investment return of around six percent, although that return should be 12 percent.

B908

CSO: 5500

DIGITAL COMMUNICATIONS SYSTEMS SUCCESSFULLY TESTED

Sao Paulo FOLHA DE SAO PAULO in Portuguese 6 Dec 80 p 14

[Article by Maria Cristina Frias: "Digital Communications System in the Country; UNICAMP And TELEBRAS Doing Research"]

[Text] As of next year, a telephone call may be sent with another 29 calls on a single channel with equipment completely built in the country as a result of the research made by the Campinas State University [UNICAMP] and the Research and Development Center (CPqD), an agency of TELEBRAS [Brazilian Telecommunications, Inc] (which is financing the project).

For Brazil, according to Professor Dalton Soares Arantes, chief of the Electrical Engineering Department of the School of Engineering of UNICAMP, the accomplishment of that research and its application in the national telecommunications system could mean the end of the importing of technology and materials in the area of communications, a rationalization of services and, therefore, a great saving.

In a country in which only one of every six inhabitants has a telephone (in the United States there is almost one telephone for every inhabitant), the application of the digital transmission systems is vital, because in addition to allowing a rationalization of services, they are of low installations and maintenance cost.

In those modern systems, explains Professor Arantes, the electrical signal generated in the transmitter is initially coded in binary form, like the signals used in computers, and then transmitted on the channel.

"In the systems now in use in the country in the area of communications--the imported digital systems are just beginning to be adopted--the original electric signal, which may be the voice emitted by a telephone, for example, is transmitted basically in the same form that it was generated at the transmitting source. That is why they are called 'analogical.'"

The researcher adds: "Because they possess those characteristics, the analog systems are disadvantageous by comparison with the digital, because in addition to being more expensive, the fidelity of their transmissions depends on the distance between terminals; the signal emitted in those systems is not immune to

interference, their equipment does not last as long as the equipment used in the digital systems, do not allow the use of integrated and miniaturized digital circuits (which mean greater savings) nor the integration of voice, data and picture signals."

That integration of various types of information in the digital systems takes place, according to the explanation of Professor Dalton Soares Arantes, by means of coding in binary form of each of the signals (voice, television and so forth) and the subsequent passage through a multiplexer which has the function of mixing those signals of different origins.

"Time division multiplexing," adds the professor, "is the name given to that technology because each of the signals is allocated a fraction of time in such a way that the various signals are intertwined cyclically in time, allowing all the channels to be transmitted and the receiving terminal to sort out the multiplexed signal, thus separating the original pulses into their proper channels."

Various studies in the area of communications by means digital systems are being made at UNICAMP by a group of 25 engineers financed by TELEBRAS, of whom Professor Arantes is the substitute coordinator.

"We began our activities in 1973 when an agreement was made with TELEBRAS," says the professor. "Thanks to its great support and its policy which leaned toward research in the communications area--it created the CPqD in Campinas, which is working together with that group in some of the research--we are becoming independent from the technological point of view in that area."

The Team Has Had Success

"If all the state universities were to sign new and more lasting agreements for research, we would certainly win our technological independence," says Professor Arantes, who despite the fact that he heads one of the largest departments of UNICAMP, works in a room in which all the furniture is on loan from TELEBRAS.

"The state government truly does not support its universities," mourns the researcher.

Through the agreement, the team, which at the beginning of the work was coordinated by Professor Rege Scarabucci, has had some successes.

In 1976, it concluded the preparation of a laboratory prototype of an MCP (Pulse Code Modulation) system with 30 voice channels. In that system, 30 different channels are coded in binary form and transmitted on a single wire at the rate of two million "bits" per second ("bits" is the abbreviation for "binary digits," which are the pulses transmitted in the fractions of time allocated to each channel)..

The conversion of that laboratory prototype into an industrial prototype was concluded in a joint work with the CPqD TELEBRAS team and national industry in 1978. Next year that prototype should be available commercially, according to Professor Dalton Soares Arantes.

In that same year, the group, under the coordination of Professor Arantes, produced a laboratory prototype for multiplexing 120 telephone channels at the rate of eight million bits per second. The work is now being subjected to field tests in Curitiba.

Next, a laboratory prototype was developed together with the CPqD for the digital transmission of 480 telephone channels at 34 million bits per second via radio.

That form of transmission, also in the test phase, is very efficient when there are great distances between terminals, says Professor Arantes.

Another project being tested, and which was prepared jointly with the CPqD under the coordination of Professor Arantes at UNICAMP, is that of a laboratory prototype for the digital transmission of 480 telephone channels by means of optic fibers.

"Those fibers, which are made from quartz crystals, in addition to being immune to noise are more efficient, lighter (just one millimeter thick, scores of them can be placed in one cable) and cheaper, since we have a large part of the world's quartz production," says the research coordinator.

"Our crystal," he says, "has been exported to Europe and the United States, who prepare it with a view to its applications in the area of communications. Once processed, the product is imported by the country in which it originates."

The UNICAMP Physics Institute participated in the optic fiber project, developing lasers used for modulating the signal in the optic fiber, adds Professor Arantes.

In addition to the initiation and conclusion of many projects, the agreement with TELEBRAS has facilitated the training of skilled personnel in the area of communications. In that area alone, 33 masters and 3 doctorate thesis have been written since 1973.

During the next three years, the team expects to work on the research and development of an MCP prototype for 60 telephone channels at two million bits per second to double the capacity of the communications network; research and construction of a prototype for the digital coding of color pictures for transmitting television signals, and give support and advice to the CPqD in the industrialization of projects such as optic fiber and digital radio communications, among others.

According to Professor Dalton Arantes, Brazil is keeping up with developed countries in the field of communications, being the "only country in Latin America which is carrying out an ambitious process of digital communications."

8908

CSO: 5500

BRIEFS

TELECOMMUNICATIONS FUNDING ASSURED—Sao Paulo (O GLOBO)—The assurance given by Minister of Planning Delfim Netto that the telecommunications industry will have 80 percent of the money from the National Telecommunications Fund (FNT) in 1981, opened new horizons for the sector in the coming year. In addition to the release of those funds, estimated at around 24 billion cruzeiros, the readjustment of rates to truly realistic levels is important, in the opinion of the director of the Ericsson Corporation, Jose Olavo Diniz, and the assistant director of the corporation, Miguel Ignatios. The annual luncheon of the sector held at the National Club was attended only by the vice president of the republic, Aureliano Chaves because Ministers Said Farhat, Camilo Penna and Haroldo Correa de Matos had to return hurriedly to Brasilia because of the imminent announcement that the winning companies in the drawing by the Ministry of Communications for the exploitation of two television channels were going to be revealed. During the meeting, in which the president of TELEBAHIA, Sebastiao Alfa, was elected administrator of the year and the president of the Central Brazil Telephone Company (CTBC), Alexandrino Garcia, received a special honor for his pioneer work in the sector in the central region, many criticisms were made of the government policy in the area of telecommunications. Some businessmen said that cuts in expenditures in the sector reached 100 billion cruzeiros at 1980 prices and that in the past administration, SEPLAN [Planning Secretariat] cut 50 percent of the FNT resources to which the industry had the right for new projects. [Text] [Rio de Janeiro O GLOBO in Portuguese 12 Dec 80 p 23] 8908

CSO: 5500

NORTH AFRICAN AFFAIRS

BRIEFS

MOROCCO, IRAQ DIRECT TELEGRAPH LINE--A telegraphic line has been opened between MAP and INA. The two-way line will be operational for 24 hours and will enable the two agencies to exchange national and international reports, in accordance with an agreement concluded in 1978, in Arabic. Each agency will transmit the reports of the other over its internal and external network. [Excerpt] [LD051221 Rabat Domestic Service in Arabic 1300 GMT 2 Jan 81]

CSO: 5500

TUNISIA

BRIEFS

AGREEMENT FOR 60,000 LINES--In connection with the signing of a contract for the acquisition of 60,000 new electronic telephone lines, Mr Sadok Ben Jomaa and Mr Brahim Khouaja, minister of transport and communications and secretary of state for PTT [Posts, Telephones and Telegraphs] respectively, received two French delegations, one representing the French Secretariat of PTT, the other representing the CCE [General Electrical Company]. The working session dealt particularly with the introduction and impact of this new market, the possibilities of creating a new telecommunications industry in Tunisia, three-way cooperation, training in the specialized field of electronics, and the installation of a third underwater cable between Tunisia and France around the end of 1980. The 60,000 new telephone lines will provide increased service to the areas of Sousse, Sfax and Gabes. The first exchanges will be put in service in 1982. [Text] [Tunis LA PRESSE DE TUNISIE in French 4 Dec 80 p 5] 9238

CSO: 5500

ORTS SETTING UP EMERGENCY PLAN TO OVERCOME PROBLEMS

Dakar LE SOLEIL in French 20 Nov 80 p 3

[Article by Abdallah Faye: "Emergency Plan to Start up in December"]

[Text] Is the ordeal of the technicians and journalists of the Senegalese Office of Television Broadcasting (ORTS) drawing to a close? One is entitled to hope so, with the approaching gradual putting in place of the ORTS emergency plan, the first components of which (basically audio-visual equipment) will arrive next month.

The emergency plan, the information minister explained to us, is calculated at some 847,000,000. It is being financed by the Central Fund for Economic Cooperation [CCCE] (550,000,000), the Aid and Cooperation Fund [FAC] (237,000,000), with a contribution from the Senegalese government amounting to 60,000,000 CFA francs. Its chief objective is to recondition the 200-kilowatt medium-wave aerial transmitters and the 100-kilowatt short-wave aerial transmitters. Also provided for is the reconditioning of six radio studios, four in Dakar, one in Ziguinchor and another in Tambacounda.

In television, the only studio is to be completely done over with improved audio-visual equipment and installation of perfect lighting.

This does not mean that the small screen will cease operating once the work is finished. With the arrival in December of a new van for outside color broadcasting, the difficulty will be surmounted. The van is to serve as a studio (it is large enough) at the same time that it will provide broadcasting, when the improvement work is completed.

Once the studio is like new again, the van will carry on its proper work, which is outside broadcasting. And it will even be able to film productions in natural settings, recorded or live, thanks to the radio waves that are going to be directly connected with the central television studio.

The opening of a second studio, which was announced by the information minister when the budget was voted on in the National Assembly, will not happen tomorrow. In fact, Daouda Sow believes it is in danger of being too expensive, because some 200 million francs are required simply to renovate and equip the old one.

A Studio at the Sorano

Meanwhile, provisions have been made to use the stage of the Daniel Sorano National Theater as a production studio, with the aid of the van.

In addition to these equipment supplies, the emergency plan includes a training and technical assistance section, to train the staff in the new techniques of handling color equipment. The television staff are already taking courses at the ORTS Center for Professional Training, in the use and maintenance of the new equipment.

The transactions have been approved and notice given of the supplies since 14 November; which explains why the van and the replacement parts will be received next month. Installation of all the components of the emergency plan is scheduled for September 1981. The project is to be accomplished in stages, following a precise schedule drawn up by the information minister.

However, the emergency plan is not settling all the problems raised at ORTS, according to the information minister. First, there are the radio station transmitters, which have been operating since independence and have run out of wind. There is also a space problem, especially apparent in television, not to mention the troubles that constantly plague the regional stations, some of which have been silent for a while.

But the major problem that worries the information minister is radio coverage of the national territory. The government will devote itself to this with all its means, he indicated. And if it is not successful in providing the coverage through the emergency plan, it will seek other means to do so.

8946
CSO: 5500

BRIEFS

TELECOMMUNICATIONS IMPROVEMENTS--The Tanzania Posts and Telecommunications Corporation is undertaking four projects aimed at facilitating telecommunications services within and outside the country. The corporation's acting director general, Dr Kasambala, said in Dar Es Salaam today that the projects included expansion and installation of telephone stations in various upcountry centers. Other projects will involve the construction of monitoring stations at Kunduchi in Dar Es Salaam for frequency allocation and monitoring and the finalization of microwave links for the Mwenge earth satellite station. Ndugu Kasambala added that the corporation will also construct telephone houses at Zanzibar, Chake Chake, Wete, Tabora, Kigoma, Mbeya and at post house in Dar Es Salaam. [Text] [Dar Es Salaam in English to East Africa 1600 GMT 30 Dec 80]

CSO: 5500

BRIEFS

TV STATION COMMISSIONED--Alma-Ata farmers and livestock raisers in the villages and aul of Irtyshskaya Oblast [Priuraliye] saw the new year's "Blue Light" [presumably name of television program]. A television station has been commissioned in Furmanovo, thereby ensuring the stable reception of central television programs. With its commissioning the 5-year program for the development of television broadcasting in Kazakhstan has been completed. In the next 5-year period the new "Moskva" space communication system operating in Alma-Ata and its oblast will cover many regions of the republic. [Text] [LD051627 Moscow SOVETSKAYA KULTURA in Russian 1 Jan 81 p 1]

RADIO TRANSMITTER IN ALTAYSKIY KRAY--The number of television viewers in Altayskiy Kray increased on new year's night. Television sets receiving programs from space television retransmitters came to life in Ozerney, Charysh and other remote villages in the kray. The most powerful radio relay station has gone into service near the village of Ust-Kalmanka. Preparations have now been completed for the second all-union program of central television to be received in Altayskiy Kray. As is known, the introduction of this program was envisaged in CPSU plans to take place by the time of the 26th party congress. In an interview with a TASS correspondent, Yushkyavichyus, deputy chairman of the USSR State Committee for Television and Radio Broadcasting, noted that it would have been impossible to solve this task without the new television and radio center which was built for the 1980 olympic games. It has been used in post-olympic service since last October. Many technical facilities will be used to broadcast the new program, including the "Moskva" and "Ekran" land stations. Early this year, 20 "Moskva" stations will be set up for broadcasting to areas in Tyumenskaya Oblast, Kazakhstan, Central Asia and Novaya Zemlya. This will enable two all-union programs to be received here at the same time. [Text] [LD022034 Moscow Domestic Service in Russian 0000 GMT 2 Jan 81]

'ORBITA' STATION COMMISSIONED--Yuzhno-Sakhalinsk--The 10th "Orbita" space communication station has been commissioned in Yuzhno-Sakhalinskaya Oblast. It is the last of the "Orbitas" intended to be constructed here. In a short space of time the stations have provided more than four-fifths of the population of Sakhalin and the Kurils with a television service. [Text] [LD051625 Moscow SELSKAYA ZHIZN in Russian 3 Jan 81 p 1]

INTERNATIONAL AFFAIRS

BRIEFS

NEW EEC DATA BANK--On 18 September, the CISI [International Information Science Services Company], a French informatics services company, announced the conclusion of an agreement with the EEC to create the largest macroeconomics data bank in Europe. This file, designated "Chronos Eurostat," will contain around 600,000 macroeconomic strings in a total of 23 different domains (agriculture, industrial production, fishing, developing countries, EEC imports and exports, etc...). In all, the information to be offered by this data bank will represent 1 billion printed characters, or, the equivalent of 400,000 typewritten pages. This macroeconomics data bank, to be formatted by the European Statistics Office, will be disseminated by the CISI in France, Europe and North America. The file will become accessible starting in early 1981 via the EURONET and TRANSPAC informatics networks. The CISI is the second largest informatics services company in Europe and the seventh largest in the world. [Text] [Paris AFP SCIENCES in French 25 Sep 80 p 22] 9238

CSO: 5500

EXPERIMENTAL USE OF TELEMATICS FOR DAILY PRESS

Paris AFP SCIENCES in French 30 Oct 80 pp 17-18

[Text] Paris--The daily press associations have just formed a GIE [Economic Interest Group] to experiment with the possibilities of applying the "Teletel" system to the daily press.

One of the GIE's objectives, according to its administrator, Mr Pierre Jaume, will be to provide for the possible participation by the daily press in the Velizy experiment, which is due to start in March, involving 2,500 subscribers. Mr Jaume is president of the Inter-association Technical Research Committee formed by the SNPQR [National Association of the Regional Daily Press], the SPP [Parisian Press Association], the SQR [Regional Daily Newspapers Association], and the SQD [Departmental Daily Newspapers Association].

The journalists belonging to the GIE, which is based in Paris, will be asked to prepare and update daily a very concise news bulletin that can be disseminated over Teletel (a television screen linked by telephone to a central processing computer that "brokers" diverse practical, juridical, economic and other information).

Thus, according to Mr Jaume, the press will be prepared when the use of telematics becomes generalized. This telematics press project, however, will be subject to the outcome of the work of the Government and Press Telematics Commission set up by the government last July.

The Government and Press Telematics Commission consists of representatives of the ministries and government agencies concerned (Communication, PTT, Industry, DATAR [Delegation for Territorial Development and Regional Action]) and of the daily press associations. Its mission is to draw up a set of telematics specifications, terms and conditions, and, according to Mr Jaume, to set forth "who does what and who is responsible for what" as regards telematics and the press.

The GIE's experimental project has only just begun. For 1980, however, the investment in initial experiments will total 600,000 francs. A request for financial participation in the project by the DIELI [Directorate for Electronics and Informatics Industries] has been filed with the Ministry of Industry.

9399

CSO: 5500

ITALY

UNCERTAIN FUTURE FOR NATION'S TELECOMMUNICATIONS INDUSTRY

Paris ELECTRONIQUE ACTUALITES in French 21 Nov 80 p 3

[Article by Marilisa Verti]

[Text] Milan. Telecommunications are going through difficult times. In addition to government problems, with portfolios being shuffled among ministers who cannot manage to define any precise programs, there is absolute uncertainty about the future. Before the summer, because of the lack of financing for the SIP [Italian Telephone Company], a cutback in orders for manufacturers of about 25 percent was expected, with harsh consequences for the job market: of 60,000 people affected, about 30,000 persons were expected to be partially idled, leading to a high number of layoffs. These forecasts did not materialize, thanks to the 400 billion for reinvestment in the STET [Telephone Finance Corporation] allocated by the IRI [Industrial Reconstruction Institute]. But at present, with lower rates being demanded by the users' defense committee and with 7.8 billion lira in debts run up by the SIP, the telecommunications industry is back in a situation in which everything must once again be questioned.

The various companies active in Italy: Italtel (formerly SIT-Siemens), Telettra, GTE, Face Standard (ITT group) and Patme, which differ from each other, both in their historic development and in the technology they use, reacted quite differently to the almost total decline in SIP orders in the switching sector, which will be one of the fundamental points for the introduction of electronic technology.

Italtel holds about 50 percent of the market, but despite its size, it has in the past not been able to diversify its products and its market, and so it is almost completely dependent on SIP orders. Italtel's leading product is the very well known Proteo, designed about 10 years ago and now in the development phase. It is precisely because Italtel has not managed to really diversify its production (it is absent from the field of data transmission, for

example), that it has been most severely affected by the crisis in this sector. Today the company seems to have decided to change its policy, and a finance corporation is apparently to be established; this firm will be run by a number of firms specializing in various sectors: public switching, telematics, transmission, etc., so that it can become an effective presence in a variety of fields. Moreover, the draft agreements with Telettra on switching are likely to become firm accords. Telettra is the other Italian agency (it is part of the Fiat group), and it holds about 8 percent of the Italian national market. To date, Telettra has not been seriously hurt by the crisis for two reasons: mainly because it is not present in a major way in the public switching sector, and secondly, because its activity is essentially concentrated in foreign markets.

GTE, because of its small size and because of the great diversity of its products, should be able to hold its losses caused by this crisis within acceptable limits. The share of this U.S. firm in the Italian market must be nearly 12 percent and so far its investment rate of recent years has been maintained. We can assume that the situation will remain stationary because GTE is not involved in the network installation sector. Another U.S. firm involved in Italy is the ITT group (20 percent of the market), whose main company is Face Standard. Despite its high profits, the company is not planning to reinvest in Italy in production and research, but it has decided to wait, in an attempt to optimize the volume of production by means of sub-contracting.

The Swedish group Ericsson is represented in Italy by Fatme, which is in debt and which is putting on pressure to have its actions taken to support employment in the south credited. This company has about 10 percent of the market and is involved in transmission and switching, but it has also been hit by what is happening in this sector.

This is only a reflection of what is going on throughout Italy. Depending on their ability to diversify and the importance of their exports, some companies have managed to survive in this chaos. The crisis should not be attributed to the actions taken by the agencies involved, but rather to the management system used in Italy.

Despite these ups and downs, however, it does seem that the present situation should improve. Recent statements made by the posts and telecommunications ministry have actually announced for 1980 an SIP investment of 2,250 billion lira, a guarantee of intervention in data transmission in coming years, the development of the information processing system for 1983, and specific developments in package switching (for the latter, forecasts call for 100,000 users in 5 years).

1981 will also see the start of some teletext and viewdata tests (based on the English Prestel model), which should become operational in a few years.

In the field of electronic switching, the strong point now is the Proteo system which is produced by Italtel. Some technological innovations are now being made in this system so that it can be marketed internationally. Pressure is being applied from all sides for the Italian government to select one national switching system. It is hoped that a unified system will be chosen, to permit maximum growth in this sector. Other programs are designed to reach accords between the various companies operating in the Italian market. These changes are essential, given the aspect of this sector in Italy, and these changes were included in the Final Electronics Plan. In summary, the proposals concerning telecommunications are based:

- a. On the need to reduce the number of existing technologies by means of specifications which will enhance the value of Italy's production;
- b. On the fact of favoring a policy of agreements between different agencies, not only national, but also with multi-nationals, in order to increase Italy's export potential;
- c. On the planned introduction of electronic switching, skipping over the electromechanical phase;
- d. On the construction of a national information processing network and the introduction of new services which can be integrated in traditional telecommunications facilities;
- e. And on methods of financing research and restructuring plans that are consistent with the preceding points.

These are the government's guidelines. It is clear that a commitment in this direction would help to alleviate some of the problems that are affecting the telecommunications sector in Italy.

7679
CSO: 5500

NEW OPTICAL FIBER CABLE

Oslo NORGES HANDELS OG SJOFARTSIDENDE in Norwegian 12 Oct 80 p 12]

[Text] The requirements of power and telecommunication transmissions are usually met by the use of two different types of cables, and these ordinarily cannot be laid on the same run. Because the costs of laying cable are especially high for submarine transmitting, it would therefore be desirable to put two cables having approximately the same end points into one installation. With the development of optical fiber cables, which are not affected by the tension field surrounding a power cable, it has become technically feasible to put the combined cable types into use. Standard Telefon og Kabelfabrik A/S (STK), whose competence stretches from the largest submarine cables to transmission by hair-thin fibers, has now begun the construction of such cable. It is a matter of a 24 kV submarine cable insulated by cross-bound polyethylene, with an optical fiber cable laid inside it. The fiber cable, which will cover the telecommunication needs in the combined cable, simultaneously functions as a filler element in the power cable. Outwardly, the cable is the ordinary submarine cable, with sheathing of whatever dimensions are needed.



CSO: 5500

NORWAY

BRIEFS

TELEPHONE NET TO EXPAND—"In the course of the next 10 years we will double in size the telephone network which has taken 125 years to develop. In order to be able to accomplish this expansion and to offer a choice of modern services, investments of 25 billion kr are required during the same period," said Director General Kjeli Holler of the Telegraph Administration in a speech to the Polytechnical Society in Oslo on Thursday. Holler stated that in order to carry out the future tasks the Telegraph Administration must during these 10 years recruit 11,250 new workers--1,050 to meet the increased demand for staff and 10,200 to compensate the natural attrition of workers and staff during this period. "The growth that we are planning for here implies that every single inhabitant of our country will have a telephone by the end of this period. One must believe that this necessarily will relieve the telephone queues," said Holler. At the end of 1979, 94,000 were waiting to acquire a telephone--6,600 more than the year before. "In 1980 we are counting on making 77,000 telephone installations. But this unfortunately is not enough. While in the '60's we filled on the average all of 4,000 subscriptions per year above the demand, the ratio was reversed in the '70's. In the latter half of the '70's we had an explosive increase in the demand for telephones, and this resulted in an inevitable sharp rise in the waiting lists," stated Holler. [Text] [Oslo ARBEIDERBLADET in Norwegian 15 Oct 80 p 7] 9655

CSO: 5500

END

END OF

FICHE

DATE FILMED

Jan 26, 1981